Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) An isolated nucleic acid molecule comprising a sequence belonging to a *gag* gene of an endogenous retrovirus, wherein said nucleic acid molecule comprises a sequence selected from the group consisting of: (i) SEQ ID NO:2; (ii) a sequence encoding an expression product, the sequence of which comprises SEQ ID NO:31; and (iii) the sequence fully complementary to sequence (i) or (ii).

2–6. (Canceled)

7. (Previously Presented) An isolated transcription product which can be obtained by the complete transcription of an entire nucleic acid molecule having a sequence selected from the group consisting of: (i) SEQ ID NO:2; and (ii) a sequence encoding an expression product, the sequence of which comprises SEQ ID NO:31.

8. (Withdrawn) A method for detecting, in a biological sample, nucleotide sequences which are integrated into the DNA of the human genome and which belong to the *gag* gene of an endogenous retrovirus associated with an autoimmune disease, or with unsuccessful pregnancy or pathological conditions of pregnancy, characterized in that:

- a prior step of extraction of the cellular DNA of said biological sample is carried out, and then at least one cycle of amplification of the cellular DNA is carried out,

- a given probe, which hybridizes with said nucleotide sequence and forms a hybridization complex, is brought into contact, under conditions suitable for the hybridization, with the cellular DNA present in the sample, said probe comprising at least 15 contiguous nucleotides of SEQ ID NO: 3, and

- the hybridization complexes formed are detected by any suitable means.

9. (Withdrawn) The method according to claim 8, characterized in that the probe is labeled with a tracer.

10. (Withdrawn) A method for detecting, in a biological sample, nucleotide sequences which are integrated into the DNA of the human genome and which belong to the *gag* gene of an endogenous retrovirus associated with an autoimmune disease, or with unsuccessful pregnancy or pathological conditions of pregnancy, characterized in that:

- a prior step of extraction of the cellular DNA of said biological sample, optionally derived from isolated chromosomes, is carried out, and then at least one cycle of amplification of the cellular DNA is carried out,

- a step of in vitro transcription/translation of the amplified product is carried out, and

- the product derived from the transcription/translation step is reacted with serum or plasma from a patient with an autoimmune disease.

11. (Withdrawn) The method according to claim 8, characterized in that the biological sample is a biological fluid selected from the group consisting of: serum, plasma, synovial fluid and urine.

12. (Withdrawn) A method for studying and/or monitoring T-cell proliferation in vitro, according to which the T-cells from a patient are brought into contact with synthetic peptides belonging to SEQ ID NO: 31.

13. (Withdrawn) A method for the in situ molecular labeling of chromosomes isolated from patients, in which a probe labeled with any suitable tracer, and comprising at least 15 contiguous monomers of SEQ ID NO: 3, is used.

14. (Withdrawn) A recombinant protein obtained using an expression cassette in a bacterial host, having its protein sequence consist of SEQ ID NO: 31.

15. (Withdrawn) A recombinant protein according to claim 14, characterized in that the bacterial host is *E. coli*.

16. (Previously Presented) A reagent comprising at least one isolated nucleic acid molecule according to claim 1.

17. (Withdrawn) The method according to claim 10, wherein said endogenous retrovirus is associated with an autoimmune disease.

18. (Withdrawn) The method according to claim 17, wherein said autoimmune disease is multiple sclerosis.

19. (Withdrawn) The method according to claim 10, characterized in that the biological sample is a biological fluid selected from the group consisting of: serum, plasma, synovial fluid and urine.

20. (Withdrawn) A method for studying and/or monitoring T-cell proliferation in vitro, according to which the T-cells from a patient are brought into contact with transcription/translation products as obtained according to the method of claim 19.

21. (Previously Presented) A reagent comprising at least one transcription product according to claim 7.

22. (Withdrawn) A reagent for detecting, in a biological sample, an autoimmune disease or monitoring pregnancy, comprising at least one synthetic peptide belonging to SEQ ID NO: 31.

23. (Withdrawn) A reagent for detecting, in a biological sample, an autoimmune disease or monitoring pregnancy, comprising at least one recombinant protein according to claim 14.

24. (Withdrawn) A method for detecting susceptibility to an autoimmune disease or monitoring pregnancy of a patient, comprising bringing a biological sample of said patient into contact with at least one isolated nucleic acid molecule according to claim 1.

25. (Withdrawn) The method of claim 24, wherein said autoimmune disease is multiple sclerosis.

26. (Withdrawn) A method for detecting susceptibility to an autoimmune disease or monitoring pregnancy of a patient, comprising bringing a biological sample of said patient into contact with at least one transcription/translation product as obtained according to the method of claim 19.

27. (Withdrawn) The method of claim 26, wherein said autoimmune disease is multiple sclerosis.

28. (Withdrawn) A method for detecting susceptibility to an autoimmune disease or monitoring pregnancy of a patient, comprising bringing a biological sample of said patient into contact with at least one synthetic peptide belonging to SEQ ID NO: 31.

29. (Withdrawn) The method of claim 28, wherein said autoimmune disease is multiple sclerosis.

30. (Withdrawn) A method for detecting susceptibility to an autoimmune disease or monitoring pregnancy of a patient, comprising bringing a biological sample of said patient into contact with at least one recombinant protein according to claim 14.

31. (Withdrawn) The method of claim 30, wherein said autoimmune disease is multiple sclerosis.

32. (Withdrawn) The method according to claim 8, wherein said amplification is carried out by PCR using primers selected from the group consisting of SEQ ID NO: 4 to SEQ ID NO: 9 and SEQ ID NO: 12 to SEQ ID NO: 17.

33. (Withdrawn) The method according to claim 8, wherein said probe comprises at least 17 contiguous nucleotides of SEQ ID NO: 3.

34. (Withdrawn) The method according to claim 8, wherein said probe comprises at least 19 contiguous nucleotides of SEQ ID NO: 3.

35. (Withdrawn) The method according to claim 8, wherein said conditions suitable for hybridization are conditions of high stringency.

36. (Withdrawn) The method according to claim 10, wherein said amplification is carried out by PCR using primers selected from the group consisting of SEQ ID NO: 4 to SEQ ID NO: 9 and SEQ ID NO: 12 to SEQ ID NO: 17.

37–40. (Canceled)

41. (Withdrawn) The method according to claim 8, wherein said endogenous retrovirus is associated with an autoimmune disease.

42. (Withdrawn) The method according to claim 41, wherein said autoimmune disease is multiple sclerosis.

43. (Withdrawn) The method according to claim 9, wherein said tracer is a radioactive tracer or an enzyme.

44–45. (Canceled)

46. (Previously Presented) The nucleic acid molecule according to claim 1, wherein said molecule has a sequence comprising SEQ ID NO:2.

47–48. (Canceled)